

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Application No. 09/621,691
Attorney Docket No. Q60237

REMARKS

I. Introduction

Applicants add new claims 19 and 20. Therefore, by this Amendment, claims 1-20 are pending in the application. Claims 1-18 have been examined and are rejected.

Specifically, claims 1-3, 5-8, 10-12 and 14-17 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over newly cited Hasegawa et al., U.S. Patent No. 5,878,354 (hereinafter "Hasegawa") in view of Guerlin et al., U.S. Patent No. 5,870,680 (hereinafter "Guerlin").

Claims 4 and 13 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hasegawa and Guerlin, and further in view of Suzuki, U.S. Patent No. 6,256,520 (hereinafter "Suzuki").

Claims 9 and 18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hasegawa and Guerlin, and further in view of Nounin et al., U.S. Patent No. 5,802,469 (hereinafter "Nounin").

Applicant traverses the rejections of claims 1-18 as follows.

II. Claim Rejections -- 35 U.S.C. § 103(a)

Claims 1-3, 5-8, 10-12 and 14-17

Claims 1-3, 5-8, 10-12 and 14-17 stand rejected under § 103(a) as allegedly being unpatentable over Hasegawa in view of Guerlin.

Applicant amends claim 1 to further clarify that the claimed radio data communication apparatus comprises "a radio portable terminal including a portable terminal section for deciding a notification condition of a circuit state between the radio portable terminal and a base station based on information of power supplied to said portable terminal section . . ." (*see also* the amendments to the radio data communication method of claim 10). Thus, claim 1 requires that a notification condition of a circuit state between the radio portable terminal and a base station is decided based on an amount of battery consumption of the portable terminal section itself, which then issues a notification to the radio portable terminal (*see also* claim 10).

By way of overview, successful connection of a radio circuit between a radio portable terminal and a base station depends on a circuit state between the radio portable terminal and the base station (*see, e.g.*, Applicant's Specification: page 1, lines 10-20; and claims 1 and 10).

Conventionally, an electric field strength is periodically acquired such that the connection of a radio circuit is attempted when the acquired electric field strength exceeds a threshold value set in advance (*see* Applicant's Specification: page 1, line 21 to page 2, line 4). However, the acquisition of an electric field strength and determination of whether or not a connection is possible are repeated until a good circuit state is obtained, problematically causing the processing speed of the radio portable terminal to decrease and/or the power consumption of the radio portable terminal to increase (*Id.*).

The present invention is directed to a radio data communication apparatus (*e.g.*, claim 1) and a radio data communication method (*e.g.*, claim 10) that solves these exemplary problems (*see, e.g.*, Applicant's Specification: page 2, lines 16-24).

Hasegawa does not teach or suggest the various features of the claimed invention.

For example and not by way of limitation, Hasegawa does not teach or suggest "a radio portable terminal including a portable terminal section for deciding a notification condition of a circuit state between the radio portable terminal and a base station", as recited in claim 1 (*see also* claim 10). The Examiner alleges that subunit 29 of portable telephone set 23 suggests "a portable terminal section for deciding a notification condition" and inner communication circuit portion 35a suggests "of a circuit state" (Hasegawa: Figs. 1 and 2; and col. 3, lines 7-40).

In Hasegawa, a portable telephone portion 33a of the main wireless unit 27 has a silent mode selection switch for selecting a silent mode in which the portable telephone set 23 receives a calling signal without generating a ringing tone (Hasegawa: col. 3, lines 31-36). An inner communication circuit portion 35a of the main wireless unit 27 automatically generates an alarm signal in response to a subsidiary signal carrying a calling signal and transmits the alarm signal to the subunit 29 when a calling signal is received from a base station 21 with the silent mode selected (Hasegawa: col. 3, lines 36-41). The subunit 29 includes a vibrator 85 that can be driven in response to the received alarm signal (Hasegawa: col. 4, lines 21-32; and Fig. 3). When the portable telephone set 23 is not operated in the silent mode, it operates in a manner similar to a usual portable telephone (Hasegawa: col. 5, lines 51-54).

Customarily, whether the silent mode should or should not be established is set by a user, and Hasegawa describes merely deciding how a notification of termination of a calling signal should be issued in accordance with the user's setting. Hasegawa fails to teach or suggest that a notification condition of a circuit state between the radio portable terminal and a base station is decided based on an amount of battery consumption of the portable terminal section itself, which then issues a notification to the radio portable terminal, as described above (*see also* claims 1 and 10).

Indeed, the processing, in Hasegawa, by a subunit 29 of an alarm signal corresponding to a call received when a portable telephone set 23 is operating in a silent mode does not correspond to deciding a notification condition of a circuit state between the radio portable terminal and a base station (*see* claims 1 and 10). Likewise, the generation of the alarm signal by the inner communication circuit portion 35a of the main wireless unit 27 upon receipt of a call at the portable telephone set 23 operating in the silent mode does not correspond to deciding a notification condition of a circuit state between the radio portable telephone terminal and a base station (*see* claims 1 and 10).

The notification condition recited in claims 1 and 10 refers to a condition established by a portable terminal section of a radio portable terminal and then sent to a portable radio section that must be satisfied by the circuit state before a portable radio section of a radio portable terminal will notify a portable terminal section of the radio portable terminal of the circuit state. Hasegawa does not teach or suggest any such notification condition.

Consequently, Hasegawa does not teach and cannot possibly suggest "deciding a notification condition of a circuit state between the radio portable terminal and a base station based on information of power supplied to said radio portable terminal", as recited in claim 1 (*see also* claim 10).

Furthermore, the Examiner acknowledges that Hasegawa fails to teach or suggest "said radio portable terminal being operable to connect a radio circuit based on the circuit state of the notification received from said portable radio section", as recited in claim 1 (*see also* claim 10).

However, the Examiner alleges that Guerlin makes up for this acknowledged deficiency of Hasegawa (*see* Office Action, page 3).

Guerlin describes conserving energy in a system including first and second devices (*e.g.*, a portable mobile telephone and a portable microcomputer) interconnected by a data communication link via respective first and second interfaces in the first and second devices by sending a message over the link to put the interface in one device on standby (Guerlin: Abstract; and col. 1, lines 9-15).

In Guerlin, the first device periodically transmits scanning messages to the second device inviting the second device to send back a message requesting to send data, if necessary (Guerlin: col. 6, lines 1-5). When N scanning messages have been sent by the first device, with no message requesting to send data having been sent back by the second device, the second device is placed on standby (Guerlin: col. 6, lines 6-28).

Placing a second device on standby when it fails to respond to N messages (from a first device) inviting the second device to respond with a request to send data does not correspond to connecting a radio circuit between the radio portable terminal and the base station based on the circuit state that has satisfied the notification condition (*see* claims 1 and 10).

For at least the above exemplary reasons, claims 1 and 10 are patentable over a reasonable combination, if any, of Hasegawa and Guerlin.

Claims 2-3, 5-8, 11-12 and 14-17 are patentable at least by virtue of their dependency, as well as the additional features recited therein.

For example and not by way of limitation, claim 2 recites, *inter alia*, that the "portable radio section includes means for deciding a notification condition of the circuit state based on the power supply information of the notification received and notifying said portable terminal section of the circuit state when the circuit state satisfies the notification condition" (*see also* claim 11). Hasegawa and Guerlin (either alone or in combination) fail to teach or suggest a portable radio section (of a radio portable terminal) includes means for deciding a notification condition of the circuit state (*i.e.*, a condition that must be satisfied before the portable radio section will notify the portable terminal section of the circuit state), let alone means for deciding a notification condition of the circuit state based on power supply information received from the portable terminal section (*see* claims 2 and 11).

Claim 3 recites, *inter alia*, that the "portable radio section includes means for determining a notification condition of the circuit state based on the power supply information of the

notification received and connecting a circuit when the circuit state satisfies the notification condition" (*see also* claim 12). Hasegawa and Guerlin (either alone or in combination) fail to teach or suggest a portable radio section (of a radio portable terminal) which includes means for deciding a notification condition of the circuit state (*i.e.*, a condition that must be satisfied before the portable radio section will connect a circuit between the radio portable terminal and a base station), let alone means for deciding a notification condition of the circuit state based on power supply information received from the portable terminal section (*see* claims 2 and 11).

Claim 5 recites, *inter alia*, that "the circuit state includes at least one of a reception electric field strength which is a strength of radio waves received from a radio base station by said portable radio section, and a state of a circuit indicated by an error rate of control data received from the radio base station by said portable radio section" (*see also* claim 14). The Examiner acknowledges that Hasegawa fails to teach or suggest these features of claim 5. However, the Examiner alleges that Guerlin makes up for this acknowledged deficiency of Hasegawa. Applicant respectfully disagrees. Guerlin describes a circuit 30 for detecting and generating state changes in a signal on the physical medium A (Guerlin: col. 7, lines 9-14). That is, the signals described in Guerlin are transmitted over a physical medium A (*i.e.*, a data link) that connects the portable mobile telephone 1 and the portable microcomputer 2 (Guerlin: col. 1, lines 53-55; and col. 7, lines 49-55). The signals that travel over the physical medium A between the portable mobile telephone 1 and the portable microcomputer 2, for generating state changes in Guerlin, do not correspond to either "a strength of radio waves received from a radio base

station" or "a state of a circuit indicated by an error rate of control data received from the radio base station".

Claim 6 recites, *inter alia*, that "said portable terminal section includes means for determining a notification condition of the circuit state based on an operation state of a CPU of said portable terminal section" (*see also* claims 7-8 and 15-17). The Examiner acknowledges that Hasegawa fails to teach or suggest these features of claim 6. However, the Examiner alleges that Guerlin makes up for this acknowledged deficiency of Hasegawa. As noted above, Guerlin describes a circuit 30 for detecting and generating state changes in a signal on the physical medium A (Guerlin: col. 7, lines 21-44). That is, in Guerlin, a state change generation signal is transmitted over a physical medium A (*i.e.*, a data link) to enable reactivation of the portable mobile telephone 1 or the portable microcomputer 2 by the other device (Guerlin: col. 7, lines 49-55). Hasegawa and Guerlin (alone or in combination) fail to teach or suggest a portable terminal section including means for determining a notification condition of the circuit state (*i.e.*, a condition that must be satisfied before the portable radio section will notify the portable terminal section of the circuit state) based on an operation state of a CPU of said portable terminal section (*see* claims 6 and 15).

Likewise, Hasegawa and Guerlin (alone or in combination) fail to teach or suggest a portable radio section including means for deciding a notification condition of the circuit state (*i.e.*, a condition that must be satisfied before the portable radio section will notify the portable terminal section of the circuit state) based on an operation state of a CPU of said portable terminal section (*see* claims 7 and 16).

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Likewise, Hasegawa and Guerlin (alone or in combination) fail to teach or suggest a portable radio section including means for deciding a notification condition of the circuit state (*i.e.*, a condition that must be satisfied before the portable radio section will connect a circuit between the radio portable terminal and the base station) based on an operation state of a CPU of said portable terminal section (*see* claims 8 and 17).

Claims 4 and 13

Claims 4 and 13 stand rejected under § 103(a) as allegedly being unpatentable over Hasegawa and Guerlin, and further in view of Suzuki.

Suzuki fails to make up for the exemplary deficiencies of Hasegawa and Guerlin, as set forth above for claims 1 and 10, from which claims 4 and 13 depend, respectively. Therefore, claims 4 and 13 are patentable over a reasonable combination, if any, of Hasegawa, Guerlin and Suzuki, at least by virtue of their dependency.

Claims 9 and 18

Claims 9 and 18 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Hasegawa and Guerlin, and further in view of Nounin.

Nounin fails to make up for the exemplary deficiencies of Hasegawa and Guerlin, as set forth above for claims 1 (and 6) and 10 (and 15), from which claims 9 and 18 depend, respectively. Therefore, claims 9 and 18 are patentable over a reasonable combination, if any, of Hasegawa, Guerlin and Nounin.

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III. New Claims 19 and 20

Applicant adds new claims 19 and 20 to obtain an expanded scope of protection. Support for these new claims is found at least in Tables 1-3 (*see* Applicant's Specification: pages 20-21). New claims 19 and 20 are patentable over the art of record at least by virtue of their dependency.

IV. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned attorney at the telephone number listed below.

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